

Alaska Department of Fish and Game  
Division of Wildlife Conservation  
**December** 2003

## State Wildlife Grants

### Performance Reports

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**ALASKA DEPARTMENT OF FISH AND GAME**  
**DIVISION OF WILDLIFE CONSERVATION**  
**PO Box 25526**  
**Juneau, AK 99802-5526**

<b>STATE:</b>	Alaska	<b>GRANT AND SEGMENT NR.:</b>	T-1- 8
		<b>PROJECT NR.:</b>	3.0
<b>WORK LOCATION:</b>	Juneau- Admiralty Island		
<b>PROJECT DURATION:</b>	1 July 2002 – 30 June 2004		
<b>PROJECT REPORTING PERIOD:</b>	July 1, 2002 to June 30, 2003		
<b>PROJECT TITLE:</b>	Stan Price State Wildlife Sanctuary Conservation Planning		

Job/Activity: Staff will tally the number of visitors to Windfall Harbor and observe what affect their presence has on the brown bears who use the creeks in that part of the Closed Area.

## **Summary of Project Accomplishments** (numbers correspond with project objectives):

1. a. From June 1st through September 10, three ADFG staff were on site at Pack Creek to explain guidelines to visitors, to receive public input, and to monitor human and bear interactions. Staff contacted 1,215 visitors during this time. Fourteen percent of the visitors arrived by boat, 24% by kayak and 61% by floatplane.

During the 2002 season, 26 encounters with bears were recorded, 22 of which involved visitors. An encounter is defined as people meeting bears as they travel around Pack Creek. Most of these encounters occurred on the trail to the viewing tower. This is a slight increase from last year and these numbers will continue to be monitored. If there is a significant rise next season we may want to collect more detailed information about what is occurring during these encounters.

b. The Forest Service and ADFG decided to gather more data in Windfall Harbor, Swan Cove and Pack Creek during May & June of 2003 for the Seymour Canal Zoologic Area Plan. Bob Christianson of SEAWAAD, mapped bear trails in Windfall, Swan, and Pack Creek to determine their location and relative use. This information will be useful for future planning to keep humans and bears separate.

2. We gathered hair samples from 6 hair-collection sites- two each located in Windfall Harbor, Pack Creek, and Swan Cove. Twenty-nine samples were collected and sent to a lab for genetic analysis. Twenty-two of the 29 samples produced solid genetic data allowing them to be assigned to 14 genetically-defined individual brown bears. Ten individual males and 4 individual females were identified in the sample population. Hair was collected from sites in all three drainages.

We met our two basic objectives for hair sampling - We determined that our technique for catching hair was more than adequate and the majority of samples provided useable information. We were also able to determine from the hair analysis that individual Pack Creek bears utilized the adjacent drainages of Swan Cove and Windfall Harbor. We will continue further analysis of the data as the study progresses and objectives are refined.

Former Forest Service Pack Creek staff person, Nancy Ratner observed bears at Pack Creek for several days during June and July. She kept written records and videotaped physical and behavioral attributes of 19 bears. This information will be used to help staff become familiar with individual bears and how they react to human presence.

3. During the 2002 field season, field staff kept track of the visitation in Windfall Harbor by recording observations on Forest Service data sheets. Visitors arrived at Windfall by chartered boat, private boat, or floatplane. There was an increase in visitor use in Windfall from the previous season. Funding was not available to hire extra staff to monitor Windfall Harbor during the 2002, but in future seasons we will try to incorporate a more formal Windfall monitoring plan into the duties of existing staff.

Staff collected the hair of four different male bears from two hair-collection sites in Windfall Harbor during the 2002 season. One of those bears also used the Pack Creek drainage.

**Submitted by:** Anne Post, Principal Investigator

**Project Cost:** Federal share \$29,000 + state share \$9,600 = total cost \$38,600

**Date:** 3 September 2003

**FEDERAL AID  
INTERIM PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** T-1-8

**PROJECT NR.:** 5.0

**WORK LOCATION:** Chilkoot River, Haines

**PROJECT DURATION:** 1 July 2002 – 30 June 2004

**PROJECT REPORTING PERIOD:** 1 July 2002 – 30 June 2003

**PROJECT TITLE:** Monitoring and assessment of strategies for conservation of brown bears

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**Project Objectives:**

**Objective 1:** Reduce the risk of bear/human conflicts (i.e., incidents of bears getting fish directly from anglers, visitors being directly threatened by bears, and bears displaced from foraging or fishing activity).

**Job/Activity a:** Provide an on-site presence and encourage area users to follow guidelines developed by the Chilkoot River Corridor Working Group (CRCWG).

**Objective 2:** Quantify information about fish use by bears, primarily brown bears, but black bears as well.

**Job/Activity a:** Conduct observations of bear fishing activities during field season.

**Objective 3:** Document instances where bears are displaced or excluded from fishing and foraging by human activities.

**Job/Activity a:** Monitor human and bear activities on these areas including land use impacts and water-based activities during field season

**Objective 4:** Assess the success of previously developed management guidelines and make recommendations for inclusion in a more comprehensive Chilkoot River Corridor Working Group plan.

**Job/Activity a:** Produce a report summarizing observations and activities during field season, and making recommendations for inclusion in CRCWG's management plan for the area.

**Summary of Project Accomplishments:**

1. In late August, a river monitor was hired to inform area users about the CRCWG guidelines, and to collect some basic user information for planning purposes. To disperse information to CRC users optimally, printed guidelines were given to visitors, news releases and public service announcements were spread by radio and newspaper, the monitor was the guest on a local call-in show. Finally, because so many of the visitors come from Whitehorse or rent their RVs there,

rental agents and sports shop owners were also contacted with information to give to their clients. The monitor's overview is attached as Appendix 1.

2. Because of the all-consuming nature of the public contact component of the monitor's duties this first year, he found it virtually impossible to collect any data on fish use by bears, especially information about catch rates. Secondly, the visibility in some of the more popular bear fishing sites was poor. However, he noted the high degree of utilization of fish scraps left from anglers cleaning their catch and not disposing of scraps properly.

3. Without being omnipresent, the monitor could not specifically collect data on bear displacement by humans. However, he was able to opportunistically collect some use data from visitors as he gave them information about guidelines for use. Appendix 2 is an overview of people's activities and Appendix 3 shows some bear use information. Appendix 4 demonstrates some of the concerns.

4. A draft report summarizing the CRCWG's activities is attached as Appendix 5, which incorporates some of the recommendations made by the monitor and others.

**Project Costs:** Federal share \$12,289 + state share \$4,097 = total cost \$16,386

**Prepared By:** Polly Hessing, Principal Investigator

**Date:** 29 October 2003



Bear viewers may form a line, preventing access to or from the river by bears.



Staying on the roadway to view bears is less intrusive than approaching them directly.



At least one tour operator moors his boats overnight at the lake. Boats should be



Traffic on the road can be an obstacle to humans and wildlife. Anglers may be hesitant to leave their fishing sites to secure their catch, leading to bears taking fish from anglers and to unsightly garbage left behind.



Most of the access to the river is on undeveloped trails, leading to stream bank erosion and undercutting of the roadbed itself.

**FEDERAL AID  
INTERIM PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** T-1-8

**PROJECT NR.:** 1.0

**WORK LOCATION:** Statewide

**PROJECT DURATION:** 1 July 2002 – 30 June 2004

**PROJECT REPORTING PERIOD:** 1 July 2002 – 30 June 2003

**PROJECT TITLE:** Conserving Alaska's Biodiversity

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**Project Objectives:**

1. Establish what research is/has been conducted or is planned for.
  - a. Conduct literature searches.
  - b. Hold/attend internal and/or interagency workgroup meetings as appropriate.
2. Participate in partnerships.
  - a. Actively participate in established partnerships for the conservation of Alaska's nongame birds, including Boreal Partners in Flight, Alaska Shorebird Conservation Plan, Alaska Waterbird Conservation Plan, Alaska Raptors Working Group, Alaska Loon Working Group, and others.
  - b. Actively participate in established partnerships and create new ones to research and conserve other nongame species.
  - c. Coordinate participation by ADF&G staff in above partnerships.
3. Coordinate and participate in monitoring, survey and inventory programs.
4. Coordinate and participate in directed studies on high priority species.
5. Research and plan conservation actions proposed to conserve identified species and habitats.
6. Gather staff, public, and agency/organization information and input, and develop strategies for drafting Alaska's comprehensive wildlife conservation plan.
  - a. Develop a timeline, strategies, measurable objectives, and key responsibilities relating to the jobs in this project for the coming year. Monitor progress throughout the year and update as required.
  - b. Coordinate and communicate with representatives from Federal, State, local agencies, NGOs, and Native corporations that manage significant areas of land and water within the state, or significantly affect the conservation of wildlife and their habitats regarding management and research priorities, plans, progress, and findings. Provide opportunities

for face to face work sessions and information exchanges that link work efforts with ongoing planning processes.

- c. Communicate with and solicit input from a geographically, culturally, and socially diverse cross section of Alaskans and visitors to Alaska regarding planning for the conservation of Alaska's biodiversity. Use a variety of tools and forums to attract and encourage thoughtful participation. These may include popular lectures on research findings or problems, workshops on biodiversity, field trips to critical habitats, staffed or unstaffed informational exhibits at venues where diverse or targeted concentrations of people occur (conferences, fairs, etc.), species-specific workshops, and/or newsletters (electronic or print). At these venues have appropriate feedback/input mechanisms (surveys, recordings, comment forms) available and strongly encourage responses.
- d. Gather information about and develop monitoring strategies for addressing problems (pre-existing, emergencies such as spills, or planned such as developments) that may adversely affect species of greatest conservation concern, either directly or through habitat changes. Where deemed appropriate, establish research and surveys to identify factors that may assist in restoration and more effective conservation of such species and their habitats.

**Summary of Project Accomplishments** (numbers correspond to project objectives/activities):

The initial period of this 2-year project has been devoted to building staff and programs to work to conserve Alaska's biodiversity. Hiring schedules have varied and in some cases been delayed with the result that some aspects of the project have progressed quicker than others. During the second year of this project, we anticipate even greater emphasis on collecting biological information for the plan, after all staff members are in place.

1. Information on research activities was gathered from partners in a variety of ways.
  - a. Literature reviews were initiated for species of greatest conservation need (SGCN) that are expected to be targets for the Comprehensive Wildlife Conservation Plan (CWCP). The Nongame Program will be working cooperatively via a contract with the Alaska Natural Heritage Program to complete this over the next year. Literature reviews were completed for inventory and research projects on high priority species listed in Objectives 3 and 4 below.
  - b. Presentations about the NGP and CWCP were made at many meetings (see Attachment 1), and information about ongoing research was gathered in that context. Additional meetings were held with staff from 3 of our 4 regions (Region I, III, and V), and one statewide program (Marine Mammals) to identify their interests and needs relative to nongame wildlife. Additional information on Alaska activities for SGCN was shared at informal partner meetings for the CWCP (see Objective 6, especially Job b).
2. ADF&G has actively participated in partnerships and related activities (see Attachment 1). Mary Rabe currently serves on the executive committee of the Alaska Shorebird Working Group. A number of ADF&G staff attended meetings of the Alaska Shorebird Working Group, Boreal Partner's in Flight, and U.S. Forest Service Regional meeting. Mary Rabe initiated several discussions with U.S. Forest Service staff about cooperative efforts to survey for bats in southeast Alaska. Jack Whitman networked extensively with Dr. Gordon Jerrell,

UAF Museum; and Dr. Joe Cook and Dr. Stephen McDonald, University of New Mexico; to develop projects for small mammals in interior Alaska. Several ADF&G staff participated in discussions with the U.S. Forest Service and American Bird Conservancy to organize surveys for the Black Swift in southeast Alaska in 2003. Several ADF&G staff worked cooperatively with Rick Lanctot, Alaska Shorebird Coordinator for U.S. Fish and Wildlife Service, to develop a proposal (Regional Assessment of Migration Stopover Sites for Shorebirds in Southcentral and Southeastern Alaska) to the Alaska's Coastal Conservation Grant Program.

3. The following inventory, survey, and monitoring projects have been initiated:
  - a. Wood frog (*Rana sylvatica*) baseline investigations in Interior Alaska
  - b. Verifying status of the Eskimo Curlew (*Numenius borealis*) in Alaska
  - c. Nesting inventory of selected raptors in Interior Alaska
  - d. Distribution, densities, and nesting success of raptors in NW Alaska
  - e. Heavy metal concentrations of small mammals living proximate to the Red Dog mine in NW Alaska
  - f. Identifying and monitoring diseases and parasites of nongame species in Interior Alaska.
    - i. West Nile virus screening
    - ii. Chytrid evaluations of wood frogs
    - iii. Ectoparasites (mites, fleas, ticks) of small mammals
    - iv. Hanta virus screening
4. The following directed studies have been initiated:
  - a. Small mammal microhabitat evaluation and relative species abundance in Interior Alaska
  - b. Ecology of boreal owls (*Aegolius funereus*) in relation to habitat alteration
    - i. Establish nest boxes along accessible transects to evaluate feasibility of spring listening surveys for determining owl nesting abundance
    - ii. Annually determine nesting densities of owls in relation to food diversity and abundance
    - iii. Assess annual productivity of nesting boreal owls throughout an array of habitat types
  - c. Multi-species predator/prey relationships among golden eagles, Dall sheep lambs, and snowshoe hares (effects of varying levels of hare densities on lamb predation)
  - d. Tundra hare densities and fluctuations in western and northwestern Alaska
5. No activity has been directed toward this Objective.
6. A number of department efforts are underway in support of developing Alaska's Comprehensive Wildlife Conservation Plan (CWCP). Within ADF&G, three divisions which received State Wildlife Grant funding participated in the process initially: the Division of Wildlife Conservation, Division of Sport Fish and the Division of Habitat and Restoration. A Charter was developed to outline the expectations and responsibilities for all divisions, in addition to describing the role of Directors and the Commissioner. An Oversight Committee with three members was designated, and charged with the responsibility for policy and guidance relative to development of the plan and the planning process, as well as identifying needed resources and adequate staff. Doug Larsen, Assistant Director, represents the

Division of Wildlife Conservation on this committee. A Task Force of four members has been designated, and charged with the responsibility for developing the CWCP for the State of Alaska. Mary Rabe, Nongame Program Coordinator, represents the Division of Wildlife conservation on this team. Task Force members have been involved in several activities developed specifically to assist states with their Plans. Three of the four Task Force members, including Mary Rabe, attended the Comprehensive Wildlife Conservation Plan Workshop for the Northwest sponsored by the U.S. Fish and Wildlife Service, along with several other potential partners from the State of Alaska. Mary also attended the winter meeting of IAFWA's Wildlife Diversity Program Managers along with a Task Force member from the Division of Sport Fish. (Note: as of May 1, 2003, the Division of Habitat and Restoration was dissolved; committee assignments and Charter were adjusted accordingly.)

- a. A continuously monitored and up-to-date process and timeline for developing the CWCP is available at <http://www.sf.adfg.state.ak.us/statewide/NGPlan/NGhome.cfm>. Although the short time frame for completing this plan requires concurrent activities, the process chart attempts to identify major developmental steps and input phases for four key groups: the Oversight Committee, the Task Force, partners, and the broader public. Key products, tasks, and responsibilities are drafted on a quarterly basis by the Task Force.
- b. Task Force members made initial contacts with a number of possible partners to discuss their conservation planning efforts, the potential for sharing data, and ways that we might work together. These include the Alaska Natural Heritage Program, Bureau of Land Management, The Nature Conservancy of Alaska, U.S. Fish and Wildlife Service Ecological Services Unit, U.S. Fish and Wildlife Service National Wildlife Refuge System, Audubon Alaska, U.S. Geological Services, and National Park Service. The Task Force is working closely with a subset of this group who are independently interested and moving forward with statewide conservation planning efforts for their organizations. Additional potential partners will be contacted over the next few months. The Task Force also worked with others to develop viable strategies for approaching Native Corporations and rural communities. It is our intent to provide all partners, in addition to ADF&G staff and members of the public, multiple review opportunities including our target species criteria, a preliminary list of target species, and conservation goals and strategies for the CWCP.
- c. Participation in the CWCP planning effort to date has been accomplished through informal meetings with potential partners, and development of a web link that includes options for sending feedback to the Task Force. In addition, the Division initiated a substantial effort to better inform the public about nongame species, Alaskan ecosystems, and issues pertaining to the conservation of Alaska's biodiversity to help them participate more meaningfully in the development of the CWCP. This effort has included publication of news articles, radio reports, lectures, field trips, and a variety of other informational tools. We are hopeful this effort will generate greater interest and participation in the CWCP planning process. In-reach efforts include a letter from the directors to their respective division staff emphasizing the importance of the CWCP to the department and the importance of staff involvement; regular updates to Division of Wildlife Conservation staff have been made through monthly activity reports.

d. No activity has been directed toward this Job.

**Project Costs:** Federal share \$ 626,459 + State share \$208,820 = Total cost \$ 835,279

**Prepared By:** Michelle Sydeman, Assistant Director; and Doug Larsen, Assistant Director

**Date:** September 18, 2003

## ATTACHMENT 1

### **Meeting Summary For Division of Wildlife Conservation's Nongame Program July 1, 2002 – June 30 2003**

#### **U.S. Fish and Wildlife Service Ecological Services**

22 August 2002

Met with various staff (including Steve Brockman, Deb Rudis, Michelle Kissling, and Kim Hastings) to talk about their projects and programs, Nongame Program development and possible partnering opportunities.

#### **U.S. Forest Service**

22 August 2002

Met with various staff (including Wini Kessler, Ellen Campbell, and Ron Dunlap) to talk about their projects and programs, Nongame Program development and possible partnering opportunities.

#### **ADF&G Region II**

26 August 2002

Introduced new Nongame Program Coordinator to Regional Supervisor and available staff (Jeff Hughes, Colleen Matt, Joe Meehan, Mike McDonald, Rick Sinnott, and Jessie Coltrane); talked about early attempts to establish a Nongame Program for the division; discussed hiring and program activities for the upcoming year, and conservation needs of nongame in southcentral AK.

#### **Elmendorf AFB: Herman Griese**

26 August 2002

Discussed natural resources issues for the Base, establishment of a Nongame Program for DWC, and conservation needs of nongame in southcentral AK.

#### **U.S. Fish and Wildlife Service Federal Aid**

26 August 2002

Introductions to staff (Al Havens, Doug Alcorn) and brief discussion about State Wildlife Grant Program, Landowner Incentive Program, and Nongame Program development.

#### **U.S. Fish and Wildlife Service Ecological Services**

26 August 2002

Met with Sue Detwiler, Endangered Species Coordinator; discussed Section 6, ESA, State Cooperative Agreement, and Nongame Program development.

#### **Audubon Alaska**

27 August 2002

Met with Stan Senner, executive director, to talk about their projects and programs, Nongame Program development and possible partnering opportunities.

#### **U.S. Fish and Wildlife Service Ecological Services**

27 August 2002

Met with various staff (including Tamara Mills, Steve Matsuoka, Bob Leedy, Anne Rappoport, and Rick Lancot) to talk about their projects and programs, Nongame Program development and possible partnering opportunities.

**U.S. Geological Survey**

27 August 2002

Met with various staff (including Bob Gill, Colleen Handel, Dirk Derksen, Scott Hatch, Joel Schmutz, and Joy Geiselman) to talk about their projects and programs, Nongame Program development and possible partnering opportunities.

**Alaska Natural Heritage Program**

28 August 2002

Met with various staff (including Keith Boggs, Director, Julie Michaelson, Gerry Tande, and Rob Lipkin) to talk about their projects and programs, Nongame Program development and possible partnering opportunities.

**U.S. Forest Service**

28 August 2002

Met with various staff (including Jerry Mastel, Aaron Poe, and Michael Goldstein) to talk about their projects and programs, Nongame Program development and possible partnering opportunities.

**The Nature Conservancy of Alaska**

28 August 2002

Met with various staff (including David Banks, State Director, Amalie Couvillion, and Sandra Day) to talk about their projects and programs, Nongame Program development and possible partnering opportunities.

**ADF&G Region III**

29 August 2002

Introduced new Nongame Program Coordinator to Regional Supervisor and available staff (including David James, Pat Valkenburg, Roy Nowlin, John Wright, Doreen Parker, Lori Quakenbush, Dale Haggstrom, Jim Marcotte, Margo Matthews, Harry Reynolds, Gay Sheffield); talked about development of a Nongame Program for the division, hiring needs, and program activities for the upcoming year.

**Alaska Bird Observatory**

29 August 2002

Met with Nancy DeWitt, Executive Director, to talk about their projects and programs, Nongame Program development and possible partnering opportunities.

**U.S. Fish and Wildlife Service Ecological Services**

29 August 2002

Met with various staff (including Ted Swem and David Payer) to talk about their projects and programs, Nongame Program development and possible partnering opportunities.

**National Park Service**

30 August 2002

Met with Carol MacIntyre to talk about ongoing work at Denali NP, NPS monitoring programs, Nongame Program development and possible partnering opportunities.

**Alaska Cooperative Fish and Wildlife Research Unit**

30 August 2002

Met with Dr. Abby Powell to discuss her research interests, ongoing projects, Nongame Program development and possible partnering opportunities.

**University of Fairbanks, Museum**

30 August 2002

Met with Dr. Kevin Winker to discuss his research interests, ongoing ornithological projects at the Museum, Nongame Program development and possible partnering opportunities.

**ADF&G Region II**

2 December 2002

A PowerPoint introduction to the Nongame Program was given by Doug Larsen.

**ADF&G Region III**

9 – 11 December 2002

Attended annual meeting to meet regional staff and learn about their programs; gave PowerPoint introduction to Nongame Program; discussed conservation needs of wildlife in north and northwest AK and potential projects for SWG funding.

**U.S. Geological Survey: Refining the Alaska Off-road Point Count Program**

13 December 2002

Gave PowerPoint introduction to Nongame Program and ADF&G manager's perspective on monitoring.

**U.S. Fish and Wildlife Service Ecological Services**

13 December 2002

Met with Kent Wohl, Regional Nongame Migratory Bird Coordinator, to talk about his program interests, Nongame Program development and possible partnering opportunities.

**Private Consultant: Dr. Mary Willson**

17 December 2002

Talked about ongoing nongame research in SEAK; discussed conservation needs of wildlife in the Southeast and potential projects for SWG funding including joint student projects with UA where Dr. Willson holds an adjunct professorship.

**ADF&G Region V**

13 – 16 January 2003

Attended annual meeting to meet regional staff and learn about their programs; gave PowerPoint introduction to Nongame Program; discussed conservation needs of wildlife in north and northwest AK and potential projects for SWG funding.

**ADF&G Region I**

21 – 23 January 2003

Attended researcher's meeting to discuss conservation needs of wildlife in SEAK and potential projects for SWG funding; attended annual meeting to meet regional staff and learn about their programs; gave PowerPoint introduction to Nongame Program.

**Wildlife Diversity Program Mangers**

28 January – 2 February 2003

Attended winter meeting, which provided an excellent opportunity for interaction with program coordinators from other states, and to join discussions about a process and strategy for developing our statewide comprehensive wildlife conservation plan.

**U. S. Forest Service**

5 February 2003

Attended joint meeting of RHWTR and WFEW for district showcase presentations and break-out sessions; gave PowerPoint introduction to Nongame Program.

**ADF&G Marine Mammal Staff**

27 February 2003

Attended annual staff meeting; gave PowerPoint introduction to Nongame Program; discussed conservation needs of marine mammals and potential projects for funding.

**Alaska Cooperative Fish and Wildlife Research Unit**

5 March 2003

Attended annual research meeting to meet staff and students and learn about ongoing projects; gave input on research interests of NGP; described funding and matching requirements for NGP; involved with informal discussions about NGP. (Attended by Mary Rabe and Jack Whitman.)

**The Wildlife Society, Alaska Chapter**

9-10 April 2003

Attended annual meeting to learn about wildlife research and management activities in state.

**U.S. Fish and Wildlife Service Ecological Services**

1 May 2003

Attended Service's Candidate Species Workshop to help identify species of greatest conservation need in the state; also met with program staff to talk about a Section 6 project selection process. (Attended by Mary Rabe, Jack Whitman, and John Wright.)

**Federal Aid**

27 May 2003

Attended meeting with ADF&G and Federal Aid staff to learn about new federal programs, recent program changes, coordinating grant administration, and upcoming FA audit.

**FEDERAL AID  
INTERIM PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** T-1-3

**PROJECT NR.:** 1.0

**WORK LOCATION:** Fairbanks

**PROJECT DURATION:** 1 July 2002 – 30 June 2004

**PROJECT REPORTING PERIOD:** 1 July 2002 – 30 June 2003

**PROJECT TITLE:** Creamer's Field Migratory Waterfowl Refuge:  
Conservation Research, Management, and Plan Revision

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**Project Objectives:**

1. Review and refine management strategies for the Refuge.  
**Job Activity a:** Review the 10-year "Interim Management Plan" for the Refuge, which was developed in 1993 and is due for revision.  
**Job Activity b:** Involve stakeholders (including public) in the Plan revision and provide a variety of opportunities and avenues to inform them about the Refuge and conservation and management issues, and to receive input.  
**Job Activity c:** Revise the plan as necessary based on stakeholder input and the status of refuge resource.
2. Protect and enhance habitat for migratory birds with special emphasis on waterfowl. Monitor results and use information to modify existing plan as necessary.  
**Job Activity a:** Farm fields to provide mature grain, sprouts and open habitat for cranes, waterfowl, and other wildlife.  
**Job Activity b:** Maintain ponds and wetlands for waterfowl, cranes, shorebirds, and other wildlife. Monitor and evaluate effectiveness of different habitats and improvements in meeting management goals relating to wildlife conservation.
3. Provide opportunities to study various species of wildlife and wildlife habitat typical of Interior Alaska.  
**Job Activity a:** Continue to support and conduct scientific studies, such as the migration banding station, and swallow and crane projects. Develop additional studies to assist in management of Refuge, address biological knowledge gaps, and improve management of wildlife and their habitats in Interior Alaska. Where appropriate, encourage and develop citizen science components that allow for increased public involvement in wildlife conservation activities and greater understanding of the role of scientific research in conservation and management.

4. Participate in cooperative agreements with local airports and others to attract birds to the Refuge to lessen likelihood of bird hazards at airports.  
**Job Activity a:** Coordinate meetings of cooperators.  
**Job Activity b:** Provide advice and information to cooperators on bird behavior and biology, and deterrence of birds from airports.  
**Job Activity c:** Develop and maintain attractive farm crops, open space, water bodies and wetlands
5. Develop informational materials to ensure long-term conservation of refuge resources.  
**Job Activity a:** Develop educational materials, including brochures and signs, essential to conserving refuge resources.

**Summary of Project Accomplishments** (numbers correspond to project objectives/activities):

1.
  - a. Cooperated with and assisted Friends of Creamer's Field organization in completion of their 5-year strategic plan for their future work on the Refuge.
  - b. Worked with public, Administration Division and others on plan to replace the original Boreal Forest Trail.
  - c. No major revisions of Refuge Management Plan identified at this time.
2.
  - a. Converted 7 acres of pasture to actively farmed fields. One hundred thirty-five acres are now actively farmed (producing either mature barely grain or barely sprouts) compared to only 30 acres in wildlife crops in 1997. The perimeter of the fields were tilled to stop encroachment by trees and shrubs.
  - b. Regular counts of waterfowl and cranes were conducted in spring and fall in each of the 18 fields to monitor bird use relative to farming activity. Nutrient levels in fields and ponds were also sampled as part of annual monitoring.
3.
  - a. Continued studies of Sandhill crane movements and survival. Forty-one cranes were captured and banded in fall 2002, and locations of cranes marked with satellite transmitters in 2001 were monitored until the last transmitter ceased working in November 2002. Mist-netting and banding of songbirds continued at the Creamer's Migration Station operated by the Alaska Bird Observatory. In July 2002 a Cornell University graduate student completed his studies of tree swallows using nest boxes on the Refuge, but the nesting swallows continue to be monitored by local high school students.
4.
  - a. Hosted annual spring bird/aircraft safety coordination meeting with representatives from airports, University Agriculture Station, US FWS, Corps of Engineers.
  - b. Provided advice and assistance to Fairbanks International Airport on bird hazing and other aspects of bird/aircraft safety program.
  - c. Constructed new pond with liner in front west field.
5.
  - a. Developed new teaching units focused on natural history, ecology and conservation of refuge resources, including testing materials. Developed monthly educational/interpretive sketch pages conveying conservation and natural history

information about refuge wildlife and habitat that were published in the Fairbanks Daily Newsminer newspaper.

**Project Costs:** Federal share \$104,883.56 + state share \$34,961.19 = total cost \$ 139,844.75

**Prepared By:** John Wright, Principal Investigator, Wildlife Biologist III

**Date:** 3 September 2003

**FEDERAL AID  
INTERIM PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** T-1-8

**PROJECT NR.:** 2.0

**WORK LOCATION:** Juneau – Mendenhall Wetlands State Game Refuge  
Gustavus – Dude Creek Critical Habitat Area

**PROJECT DURATION:** 1 July 2002 – 1 December 2004

**PROJECT REPORTING PERIOD:** 1 July 2002 – 30 June 2003

**PROJECT TITLE:** Southeast Refuges and Critical Habitats: Conservation Planning

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**Project Objectives:**

1. Participate in and assist in public planning process initiated by ADF&G Division of Habitat and Restoration for Dude Creek Critical Habitat Area (DCCHA)  
**Job/Activity a:** Compile existing data on wildlife, habitat, and public use, monitor activities on the area, and collect new data as needed for input into the planning processes  
**Job/Activity b:** Assist in acquiring up-to-date aerial photographs of DCCHA and neighboring areas  
**Job/Activity c:** Help identify stakeholder groups/individuals and develop contact information database  
**Job/Activity d:** To assist the public in being active and informed participants in the planning process and conservation strategies, provide information (using print media, field trips, lectures or other means deemed appropriate and within means of available resources) on the value of the area to wildlife and the potential impacts of various types of human uses on wildlife and habitats.
2. Participate in public planning processes for projects with potential to affect Mendenhall Wetlands State Game Refuge in order to mitigate impacts to refuge wildlife.  
**Job/Activity a:** Attend public meetings in Juneau related to planning for development projects adjacent to refuge and participate as appropriate.  
**Job/Activity b:** Conduct fine scale habitat typing on the entire refuge to identify high-value habitats and wetlands for conservation. This information will aid refuge managers in anticipating the effects of development on refuge lands, and allow informative decisions on directing development towards the least valuable areas to wildlife. This information will also allow refuge managers to focus mitigation measures towards habitat with similar values if possible.  
**Job/Activity c:** To assist the public in being active and informed participants in the planning process and conservation strategies, provide information (using print media, field trips, lectures or other means deemed appropriate and within means of available resources) on the

value of these areas to wildlife and the potential impacts of various types of human uses on wildlife and habitats.

**Summary of Project Accomplishments** (numbers correspond to project objectives/activities):

1. a. During the reporting period we contracted with an environmental firm in Gustavus to conduct sandhill crane and other wildlife observations on the DCCCHA. The data collection period started on September 1, 2003 and will be completed by October 1, 2003 with the analysis and write up being completed by December 30, 2003.  
  
b-d. The dissolution of the Habitat and Restoration Division resulted in a setback in the planning process for a management plan for the DCCCHA. Preliminary discussions towards this goal had begun, but further work could not be accomplished without the leadership and personnel of the Habitat and Restoration division. Therefore, Job/Activities b-d were not accomplished.
2. a. ADF&G staff prepared for and attended monthly meetings of the Mendenhall Wetlands Citizens Advisory Group. This group actively investigated issues and activities that had the potential to affect the Mendenhall Refuge. Because of the dissolution of the Habitat and Restoration division, our role in the planning efforts that include attending these monthly meetings has increased.  
  
b. During this report period we discussed options for achieving fine scale habitat mapping of the MWSWR and met with potential contractors to determine their capability to do it.  
  
c. ADF&G staff investigated options for signs aimed at educating refuge users about refuge issues.

**Project Costs:** Federal share \$15,725.25 + state share \$5,241.75 = total cost \$ 20,967

**Prepared By:** Neil Barten, Principal Investigator, Wildlife Biologist III

**Date:** September 4, 2003

**FEDERAL AID  
FINAL PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** T-1- 8

**PROJECT NR.:** 4.0

**WORK LOCATION:** Juneau – Baranof Island

**PROJECT DURATION:** 1 July 2002 – 30 June 2003

**PROJECT REPORTING PERIOD:** 1 July 2002 – 30 June 2003

**PROJECT TITLE:** Eva Creek brown bear monitoring and evaluation

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**Project Objectives:**

1. To quantify information on bear and human numbers at Eva Creek and elsewhere in the Lake Eva drainage during summer 2002.
2. To identify specific areas used by bears and areas used by humans at Eva Creek and elsewhere in the Lake Eva drainage during summer 2002.
3. To update information on the timing and magnitude of salmon runs at Eva Creek and correlate it with bear and human use.
4. To document instances where bears are displaced or excluded from fishing and foraging by human activities.
5. To determine how existing infrastructure (e.g. trails, viewing locations, campsites) affect people/bear interactions.  
**Jobs/Activities for Objectives 1 to 5:** Collect field data during summer 2002.
6. To survey a sample of visitors to Lake Eva to determine purpose of their visit and their level of knowledge about bears and proper behavior around bears.  
**Job/Activity:** Conduct a mail out survey of a sample of visitors to Lake Eva during fall-winter 2002-2003.
7. To use data from fieldwork to recommend options and help develop ADF&G and US Forest Service management plans for the Lake Eva area as one of the Human/bear High Use Zones named by the Unit 4 brown bear stakeholder management team.  
**Job/Activity:** Evaluate data, develop recommendations and write report during fall-winter 2002-2003.

**Summary of Project Accomplishments** (Numbers correspond to project objectives.):

During a 3½ month field season in summer 2002 staff collected data addressing project objectives at Eva Creek on Baranof Island in Southeast Alaska. A brief summary of results of that effort with respect to specific objectives follows. More detailed information can be found in the attached report “Human and Brown Bear Use of Eva Creek: a site assessment.”

1. Field staff conducted daily observations from a tree stand adjacent to Eva Creek for a minimum of 5 hours a day during the report period from July 1 – Sept. 9. Approximately 450 observation hours were logged during this period.

Field staff observed 656 human visitors to the Eva Creek drainage. The total number of guided visitors observed was approximately 1/3 of the number reported by tour operators. Based on that comparison, staff estimated 1,964 visitors to the Eva Creek watershed during the 96 days of summer in 2002. Estimated number of visitors per day was 20, however, no visitors were observed during 33% of the days. Hikers made up about 68% of the total and anglers made up 32%.

During the report period, thirty-nine separate observations of 10 individual bears occurred. In more than 450 observation hours, bears were only observed 4% of the time. The number of bears and frequency of observations were below expectations. Bears were observed for a total of 695 minutes. Bears observed were primarily subadult bears: 7 individual subadults, 3 sow & cub pairs, and 2 bears of unidentified age. Bears primarily scavenged for fish carcasses instead of catching live fish as expected.

2. Most guided human activity was along the trail on the southside of the creek. Hikers displayed the most predictable use patterns, because they remained almost entirely on the trail and moved at a steady pace. Anglers were the only visitors to walk in the creek and onshore on the north side of the creek. Fishing, boating, and air transport combined with varying noise levels introduced inconsistent and unpredictable human presence.

Habitat and field use surveys carried out by SEAWEAD indicated that most bear activity occurred on the opposited side of the stream from the trail used by humans.

3. During the summer of 2002 the sockeye salmon ran from June 25 – July 17 in Eva Creek. The chum salmon run extended from July 6 – August 25. Pink salmon were present in the creek from July 29 – September 9, the last day of the field season. Coho were expected to run from mid- to late-September but were not observed. Based on historical ADF&G data, pink salmon abundance in 2002 was average for the stream. Although the observed sockeye run of 302 fish seemed low, a lack of historical data makes it difficult to determine the relation of the run to other years. Neither the total number of bears nor the number of minutes bears were observed were significantly correlated with mean or median sockeye, pink, or chum in the stream per day. Anglers’ use of Eva Creek occurred throughout the summer but was most intense in June and early July prior to the period when salmon fishing was productive offshore.
4. It was difficult to document specific instances where bears were displaced or excluded from fishing and foraging by human activities. Bears were never observed while people were

fishing, and interactions with hikers were limited in their frequency and duration. Only five instances of bears and visitors interacting were observed. Of those, two resulted in bears abandoning activities as a direct result of human activity. Observations also suggest the following:

- Bear and human use tended not to occur simultaneously, even in sites judged to be attractive to bears.
  - Bears were observed more often when visitors were absent. During summer observations, bears were observed for a total of 695 minutes, and 93% of those observations occurred in the absence of visitors.
  - During the summer, bears were observed more frequently in the morning, and were present most often between 7 and 8 a.m. Bear observations declined at 10 a.m. Conversely, visitors reported being present at Lake Eva trail most frequently from 11 a.m. to noon. Little visitor activity was reported prior to 9 a.m.
5. The established and constructed trail is the only current existing infrastructure in the study area. As stated under item 2, most guided human activity was along the trail on the southside of the creek while bear use most bear activity occurred on the opposite side of the stream from the trail. Clearly the location of the trail influenced human activity and may have a bearing on bear activity during periods of fishing and foraging as the trail currently follows the stream bank closely for most of its length. Bear sign surveys and observations indicated that bears tend to avoid areas near the trail in spring and summer months.
6. Because of cost considerations, an online survey was chosen rather than a mail out survey to query visitors on expectations and knowledge. All visitors to the study area were invited to participate in the voluntary online survey. Signs that explained the purpose of the study and the survey were attached to survey registration boxes at the trailhead and near the lower falls. Pencils and brief optional survey registration cards were stored in the registration boxes. Researchers collected completed survey cards daily. By September 9, 2002, ninety-seven completed survey registration cards were collected and the sixty-nine valid email addresses from those cards comprised the sampling pool for an online survey. Visitors were contacted via email on October 2, 2002 and given instructions about how to complete the survey on the internet. By December 31, 2002, thirty-five visitors had completed the online survey, for a final response rate of 51%.

Most people were not visiting to view bears specifically. On the 97 returned visitor survey registration cards, 83% of visitors reported hiking, and less than half reported fishing (34%) or wildlife viewing (34%) as an planned activity for the visit. Of 35 respondents to the online survey, twenty-nine (82.9%) rated hiking as a purpose for visiting Eva Creek. 65.5% (19) of those rated hiking their highest priority. An additional seven (24.1%) hikers ranked hiking as a high priority. Eighteen of the 35 respondents (51.4%) ranked wildlife viewing as a purpose for visiting Eva Creek. Only 16.7% of those (n = 3) ranked it as their highest priority for visiting the site. An additional 6 people (33.3%) rated wildlife viewing highly. Seventeen of the 35 respondents (48.6%) ranked fishing as a purpose for visiting Eva Creek. Thirteen (76.5%) of the seventeen rated fishing their highest priority.

Most visitors wanted to see brown bears, and expected to see them at Eva Creek. However, only half of responding visitors reported seeing a brown bear at Eva Creek. Because researchers only saw bears 5% of the time, the respondents' percentage may be higher than the actual number of visitors to actually see a bear at Eva Creek. Two explanations are likely: either visitors who saw bears were more likely to complete the survey, or visitors who completed the survey confused Lake Eva with another area they visited in Southeast Alaska.

Most of the visitors who saw a bear failed to report on their group's response to the bear. Twelve of the 18 survey respondents did not answer the question. The remaining 6 respondents were equally balanced in response, with half moving away from, and half moving around the observed bear. Visitors were willing to report their noise response to bears, and thirteen (72.2%) of those who saw a bear said they remained silent. The remaining 5 respondents said they made noise. Reported noise response may have been due to the presence of a guide. Eight of ten (80%) guided visitors said they remained silent, while only five of eight (62.5%) non-guided visitors reported a quiet response when encountering a bear.

7. From fall 2002 through late spring staff analyzed data and produced a 100-page report (including appendices) based on the results of field work and the visitor survey. The report's management recommendations include options for overall management of Eva Creek as a recreation area, as well as a recommendation for rebuilding and relocating the existing trail to a route that would better separate the bulk of human visitors from areas of the stream used by bears. Among the findings was that Lake Eva / Eva Creek estuary meets the Unit 4 Brown Bear Management Team's definition of a 'Tier I Human / Bear High Use Zone', and the guidelines and stipulations the team recommended for such zones should be part of agency management in the area. The recommendations can be found in the attached report.

**Project Costs:** Federal share \$21,890.32 + state share \$7,296.78 = total cost \$ 29,187

**Prepared By:** Tom Paul, Principal Investigator, Federal Aid Coordinator

**Date:** August 25, 2003

**FEDERAL AID  
FINAL PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** T-1-8

**PROJECT NR.:** 6.0

**WORK LOCATION:** Juneau and Ketchikan

**PROJECT DURATION:** 1 July 2002 – 30 June 2003

**PROJECT REPORTING PERIOD:** 1 July 2002 – 30 June 2003

**PROJECT TITLE:** Interagency goshawk study on the Tongass National Forest: technical assistance, analysis, and dissemination of results.

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**Project Objectives:**

1. Continue analysis of data collected from 1991 – 1999 and prepare manuscripts on these topics:
  - a. Goshawk morphology as related to the status of the Queen Charlotte goshawk (*Accipiter gentilis laingi*);
  - b. Description of nest site habitat; and
  - c. Estimation of goshawk survival rates based on radiotagged birds.
2. Acquire a more complete sample of habitat data at goshawk nest sites, including (a) collecting samples from more goshawk nest sites; and (b) acquiring and analyzing fixed plot habitat data from the USFS.

**Summary of Project Accomplishments:**

1. We completed analyses listed in objectives and are in the process of finalizing manuscripts. Some delay in manuscript completion (i.e., publication) will result from processes associated with publication in peer-review journals.
  - a. A manuscript on morphology of goshawks from Southeast Alaska and Vancouver Island was presented at the International Symposium on the Ecology and Management of the Northern Goshawk held during the 2003 Annual Meeting of the Raptor Research Foundation in Anchorage, Alaska (Appendix 1). This manuscript is scheduled for publication in the proceedings from that symposium. Funding is being acquired for those proceedings and manuscripts will be assembled by the December 2003 with a tentative publish date of Winter 2004.
  - b. A manuscript on northern goshawk nest site habitat data was presented at the North American Ornithological Conference in New Orleans, LA. These data

were then combined with data from a U.S. Forest Service dataset to look at goshawk nesting area preferences. This combined manuscript was presented at the International Symposium on the Ecology and Management of the Northern Goshawk held during the 2003 Annual Meeting of the Raptor Research Foundation in Anchorage (Appendix 2). This manuscript is scheduled for publication in the proceedings from that symposium. Funding is being acquired for those proceedings and manuscripts will be assembled by the December 2003 with a tentative publish date of Winter 2004.

- c. A manuscript on northern goshawk survival rates based on radiotagged birds was prepared for the North American Ornithological Conference in New Orleans, LA (Appendix 3). This manuscript is being readied for submission to a peer-reviewed journal.
2. We acquired a more complete sample of habitat data from goshawk nest sites in Southeast Alaska.
    - a. We acquired vegetation data at 5 nesting areas during the 2002 field season, including 3 additional nest stands and 5 nest trees. This brings the total to 24 nesting areas within which 33 nest sites and 42 nest trees are described.
    - b. We acquired and analyzed habitat data from the U.S. Forest Service's Permanent Plot Grid Database. We used this dataset to generate a sample of random points ( $n = 479$ ) located throughout the Tongass National Forest to compare with northern goshawk nesting area data to better describe goshawk nesting habitat and understand goshawk selection of certain forest attributes (Appendix 2).

**Project Costs:** Federal share \$24,700 + state share \$8,200 = total cost \$32,900

**Prepared By:** Kim Titus, Principal Investigator

**Date:** 27 August 2003

## **Appendix 1.** Abstract of manuscript on northern goshawk morphology.

### SIZE AND COLOR VARIATION OF NORTHERN GOSHAWKS FROM SOUTHEAST ALASKA AND VANCOUVER ISLAND

CRAIG J. FLATTEN, Alaska Department of Fish and Game, Division of Wildlife Conservation, 2030 Sea Level Drive, #211, Ketchikan, AK 99901, USA. ERICA L. MCCLAREN, Ministry of Water, Land, and Air Protection, 2080 Labieux Road, Nanaimo, BC, Canada V9T 6J9.

Two subspecies of Northern Goshawk, hereafter goshawk, are currently recognized in North America on the basis of body size and plumage color: *Accipiter gentilis laingi* and *A. g. atricapillus*. The validity of these subspecies is questionable because descriptions were based on small sample sizes and included museum specimens and wintering individuals. Therefore, we compared size and plumage characteristics from live, breeding adult and juvenile goshawks from relatively large datasets in southeast Alaska (AK) and Vancouver Island (VI). Between 1992-2000 and 1994-2001, adult and juvenile goshawks were trapped at or near 42 and 43 nesting areas in AK and VI, respectively. We collected standard morphological data from trapped individuals. We compared size within age and sex groupings between AK and VI and assessed phenotypes of goshawks within AK, VI, and other western North American study areas. Culmen length, wing chord, hind claw length and mass reflected size (PC1) while tail length, hind claw length and tarsus width reflected shape (PC2) in adult male and female goshawks. VI adults were significantly smaller than AK adults for several PC1 size variables. Individuals from coastal islands in AK were not significantly different in size from individuals from mainland AK. VI males had significantly smaller mean wing chords than males in AK, central British Columbia, Yukon, Olympic Peninsula, Washington, northeast Oregon, and northern Arizona. Our results generally support earlier descriptions of *A. g. laingi* as smaller and darker than congeners from other regions of western North America, and confirm the existence of clinal size variation among goshawks of the Pacific Northwest Coast. Inconsistent with earlier studies, we observed a broader range of phenotypes among adults and juveniles for *A. g. laingi*, and found that overall only one-third of individuals from our study areas clearly had dark phenotype Taverner (1940) described as distinct for this race.

**Appendix 2.** Abstract of manuscript on northern goshawk nesting areas habitat preferences.

NESTING AREA PREFERENCES OF NORTHERN GOSHAWKS (*ACCIPITER GENTILIS LAINGI*) IN  
SOUTHEAST ALASKA

STEPHEN B. LEWIS and KIMBERLY TITUS, Alaska Department of Fish and Game, Division of Wildlife Conservation, P.O. Box 240020, Douglas, AK 99824, USA. CRAIG J. FLATTEN, Alaska Department of Fish and Game, Division of Wildlife Conservation, 2030 Sea Level Drive, Suite 205, Ketchikan, AK 99901, USA.

We studied northern goshawk nesting area preferences in the temperate rainforests of southeast Alaska. First, we systematically described and quantified goshawk nesting area characteristics at three spatial scales: nest tree, nest site, and nest stand. Next, we assessed nesting area preference by comparing goshawk nest stands with a sample of available forested points. We measured nest and nest tree characteristics at 37 nest trees in 22 nesting areas and measured habitat characteristics at 30 nest sites and nest stands from 21 nesting areas. Goshawks selected the location of their nests at different spatial scales based on forest structure. At the stand scale, goshawks nested in large volume, western hemlock (*Tsuga heterophylla*) dominated forests with relatively dense canopy and shrub layer. Within those stands, nest sites occurred in forest patches containing larger trees on average and an overall higher volume forest, predominately western hemlock. Nest trees were either Sitka spruce (*Picea sitchensis*) or western hemlock, were larger than those around them in the nest site (mean DBH  $\pm$  SE;  $68.7 \pm 3.7$  cm vs.  $47.4 \pm 3.4$  cm), and were either dominant or codominant in the forest canopy. Goshawk nest stands contained larger trees ( $35.5 \pm 0.4$  cm vs.  $30.2 \pm 0.1$  cm), greater basal area, and fewer trees/ha than available sites. Forest managers in southeast Alaska can ensure that goshawks have nesting habitat into the future by preserving high volume timber stands with large trees and relatively dense canopy.

**Appendix 3.** Abstract of manuscript on northern goshawk survival.

NORTHERN GOSHAWK SURVIVAL RATES ~~ TONGASS NATIONAL FOREST, ALASKA

KIM TITUS, CRAIG FLATTEN, GREY PENDLETON, RICH LOWELL, AND STEVE LEWIS, Alaska Department of Fish and Game, Division of Wildlife Conservation, Douglas and Ketchikan

Few studies have estimated northern goshawk survival rates (*Accipiter gentilis*). We used radiotelemetry to estimate goshawk survival rates by following adults from 1992 – 2000. Using data from 31 male and 32 female goshawks, we estimated survival by month using program MARK. Mean annual survival of males was 0.59 (SE = 0.10) but was not constant across months, with most male mortalities occurring in late winter. Mean annual survival of females was not constant across months or groups. Resident females had lower survival than movers. Survival estimates for males are among the lowest reported for the species. Possible explanations include transmitter impacts and types of transmitters (tailmounts and 1 – year backpacks on males versus mostly 2 – year backpacks on females). For females, the model that separated movers, residents and first year tagged birds suggests differences among groups. Females that exhibit breeding dispersal among years had much higher survival than females that remained in the same home across years, however part of this analysis is confounded by differing prey on some islands.

**FEDERAL AID  
INTERIM PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** T-1-7

**PROJECT NR.:** 1.0

**WORK LOCATION:** Kenai Peninsula

**PROJECT DURATION:** 1 July 2002– December 31, 2005

**PROJECT REPORTING PERIOD:** 1 July 2002–30 June 2003

**PROJECT TITLE:** Conservation of Kenai brown bear populations: brown bear response to human intrusions at salmon streams

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**Project Objectives:**

1. Quantify the relationship between salmon availability and fishing success (# of fish per unit time fishing), daily fishing time, total daily salmon consumption, fishing bout length, bear density, sex/age class use, bear-bear interactions, and selective salmon consumption.
2. Compare behavior, sex/age class composition, and nutritional condition of bears on salmon runs for two years. The first year will be a control with either no recreational activity, or at least a very limited amount. The second year we will continue to collect bear data, but we will also introduce a significant recreational component into the area as a treatment variable. Differences in bear behavior(s) between years will be determined.
3. Determine if bears displaced from a run by recreation can compensate for lost nutrient resources by spatially or temporally altering resource use or switching to alternative foods.
4. Determine the role of selective foraging on salmon by bears in meeting their nutritional requirements.
5. Develop a qualitative and/or quantitative model of the interaction between recreational activities, bear nutritional condition, and resource availability to provide critical information for revision of the Kenai brown bear Conservation Strategy plan, especially in the areas of temporal use patterns of brown bears on salmon streams and bear use of salmon streams in the presence of humans. Data collected from this study will also provide information to development and modification of bear viewing guidelines.

**Summary of Project Accomplishments** (numbers correspond to project objectives):

1. Data from 3 of the 5 2002 Glacier bears exhibited a peak fishing effort at 800 - 1000 minutes /day fishing. One bear had a crepuscular pattern to her fishing effort, while another foraged from 0500 to 2300 hrs. We are still analyzing data for bears 3-5. Salmon peaked at 3600 fish in the stream reach under study. We are still determining bout lengths and estimating total salmon intake.
2. In 2002 Nikolai creek study area had 610 salmon in stream section, with zero black bear and 3 brown bear observations (1 adult male, unk mix of subadults and female with coy). We were unable to collar animals on Nikolai and thus will not have nutritional condition. In 2002 we collared 5 females at Glacier creek (2 with 2 coy each, 1 with 2 yearlings, 1 with 2 2-year olds, 1 alone). Body mass increased an estimated mean of 60% from spring to fall (mean spring mass of 144.8 kg; mean fall mass of 229kg). In 2003 four bears were collared at Glacier and 10 bears were collared at Douglas. Glacier bears were 3 alone and 1 with 2 yearlings. Douglas bears captured included 7 females (5 with yearlings, 1 with coy, 1 with 2 year olds) and 3 males. Mean mass for Douglas spring females was  $197.7 \pm 22\text{kg}$ ; males were  $365 \pm 74\text{ kg}$ . We will not have seasonal behavior comparisons until end of fall field season, 2003.
3. In 2002 we had one bear that abandoned the stream for hillside vegetation in early September, while 2 others continued to shuttle between berries and salmon into late September. In 2003 we began collecting fresh fecal samples on Glacier creek to determine the timing of berry use by black and brown bears. Mitochondrial DNA analysis will determine species, and if viable, nuclear DNA will be used to identify individual.
4. No work was accomplished on this objective during the fall of 2002, as direct observations of feeding were rare. So far in 2003 we have several hundred hours of feeding observations and thus anticipate a more refined response to this objective next year.
5. Model development will proceed after the next field season, as so far no human related disturbances have occurred. We have identified both crepuscular and daytime feeding patterns in these bears, as well as a strong sensitivity to the presence on salmon streams with cover. Further work on this objective will be possible after the next phase of the project (i.e., introduction of pseudo-bear viewers).

**Project Costs:** Federal share \$96,719.70 + state share \$32,239.90 = total cost \$128,959.60

**Prepared By:** Sean Farley, Principal Investigator, Wildlife Biologist III

**Date:** September 2, 2003

**FEDERAL AID  
INTERIM PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** T-1-10

**PROJECT NR.:** 1.0

**WORK LOCATION:** Statewide

**PROJECT DURATION:** 1 October 2002 – 30 June 2004

**PROJECT REPORTING PERIOD:** 1 October 2002 – 30 June 2003

**PROJECT TITLE:** Marine Mammal conservation planning coordination

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**Project Objectives:**

1. Participate on marine mammal advisory committees and provide information to commissions for use in updates or revisions to marine mammal conservation plans.

**Job/Activity a:** Serve on advisory committees and the State of Alaska Steller sea lion restoration team to provide information on the biology and ecology of sea lions, to cooperatively revise the National Marine Fisheries Service's Recovery Plan for the Steller Sea Lion.

**Job/Activity b:** Serve on advisory committees to provide information on the biology and ecology of sea lions and information about marine mammal/fish interactions and coexistence and help the North Pacific Fisheries Management Council Steller sea lion mitigation committee develop revised Reasonable and Prudent Alternative plans to implement fisheries.

**Job/Activity c:** Serve on the Alaska Beluga Whale Committee and provide information on the biology and ecology of beluga whales, and assist in revision of the Cook Inlet Beluga Whale Conservation Plan and other beluga whale plans that may be developed.

**Job/Activity d:** Provide information on harbor seal conservation and management issues to various groups and commissions; e.g., Alaska Scientific Review Group, National Marine Fisheries Service, and the Alaska Native Harbor Seal Commission, and contribute to developing a research plan for harbor seals in Alaska.

**Job/Activity e:** Monitor and provide input into other marine mammal programs, especially those of the National Marine Fisheries Service, Fish and Wildlife Service, University of Alaska, and Alaska SeaLife Center, and assist in the selection and direction of research and monitoring for the Gulf Ecosystem Monitoring Program in the Gulf of Alaska.

2. Supervise and coordinate marine mammal staff in development of ADF&G research and contributing to development of state wildlife conservation plans.

**Job/Activity a:** Supervise four Wildlife Biologist IIIs that lead marine mammal research programs giving guidance on research objectives, methods, and analyses and helping them to develop annual and multi-year research plans for the marine mammal program.

**Job/Activity b:** Provide information on marine mammal conservation and management issues for ADF&G staff developing the state Comprehensive Wildlife Conservation Plan.

**Summary of Project Accomplishments:**

Originally, this project was to have ended on June 30, 2003, however it has been extended one year. This report covers accomplishments during the 9-months of the initial project period, Oct. 1, 2003 – June 30, 2003.

1. a. Chaired 3 meetings of the Steller sea lion (SSL) Recovery Team with discussions focused on determining current threats to the recovery of SSLs, and was the lead on revisions to the Recovery Plan. The State of Alaska SSL restoration team did not meet during the reporting period. Participated in numerous teleconferences with members of the Pacific Walrus Conservation Fund as the representative for ADF&G, resulting in a Request for Proposals and subsequent granting of funds for 6 projects after completion of the review process. Participated in the annual meeting of the Eskimo Walrus Committee and discussed development of population assessment techniques and harvest monitoring. Assisted in planning the development of a new Commission for ice seals, and helped organize a working group meeting to be held in July 2003.
1. b. Represented the SSL Recovery Team in discussions on possible interactions between SSLs and fisheries. The North Pacific Fisheries Management Council (NPFMC) RPA committee did not meet during the reporting period, but was reorganized as the NPFMC SSL Mitigation Committee, with meetings planned for the next reporting period.
1. c. Participated in the annual meeting of the Alaska Beluga Whale Committee and discussed recent population assessment results, harvest monitoring, and development of research priorities.
1. d. Met with members of the Alaska Native Harbor Seal Commission, NMFS, and the Alaska SeaLife Center to revise the Alaska Harbor Seal Research Plan (attached) and developed a joint proposal for cooperative research. Discussed status of new scientific information on the population structure of harbor seals at the autumn meeting of the Alaska Scientific Review Group, with a focus towards revising harbor seal stock structure in Alaska.
1. e. Discussed with the USFWS the population status of sea otters in Alaska and a proposed listing under the Endangered Species Act. Synthesized ADF&G marine mammal staff input on research priorities for the North Pacific Research Board (NPRB), and reviewed proposals for both the NPRB and the Gulf Ecosystem Monitoring Program.
2. a. Supervised the four principal marine mammal programs of ADF&G, including the review of research priorities, improvements in administrative support, investigation into acquiring new laboratory facilities, and acquisition of funding. Met with entire ADF&G marine mammal staff to discuss overall research direction and planning, and enhanced integration with Division of Wildlife Conservation.
2. b. Discussed integration of marine mammal conservation and management into the state Comprehensive Wildlife Conservation Plan, including status of current conservation plans for marine mammals.

**Project Costs:** Federal share \$38,996 + state share \$12,999 = total cost \$ 51,995

**Prepared By:** Robert J. Small, Principal Investigator, Marine Mammals Coordinator

**Date:** 18 September 2003

**FEDERAL AID  
INTERIM PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** RT-1

**PROJECT NR.:** 1.0

**WORK LOCATION:** McNeil River State Game Sanctuary and Refuge

**PROJECT DURATION:** 1 July 2002 – 30 September 2004

**PROJECT REPORTING PERIOD:** 1 July 2002–30 June 2003

**PROJECT TITLE:** Brown Bear Viewing and Conservation Planning

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**Project Objectives:**

1. Administer the McNeil River State Game Sanctuary and Refuge to protect the exceptional brown bear concentration (up to 60 bears at one time), while providing safe and sustainable wildlife viewing experiences for over two hundred and fifty visitors per year.
  - Job/Activity a:** Provide safety and viewing guidance and field camp support for up to 280 bear viewers, photographers and scientists per year.
  - Job/Activity b:** Staff will supervise three staff in the operation of the field facility and viewing program at McNeil River State Game Sanctuary.
  - Job/Activity c:** Respond to inquiries from hundreds of scientists, filmmakers and educators per year interested in photographing and studying bears at McNeil River State Game Sanctuary and support development of publications and films to support conservation of brown bears.
2. Review and revise the McNeil River State Game Sanctuary and Refuge Operational Plan and develop strategies for assessing factors that may be adversely affecting the McNeil River falls brown bear population.
  - Job/Activity a:** From June 7 to August 25, field staff will systematically perform hourly and daily counts of bears by sex, age, reproductive status, individual identification and number of fish caught by bears support monitoring of the population at MRSGS. Data collection in Year 2 may change as a result of Job/Activity b.
  - Job/Activity b:** Staff will evaluate and, if needed, improve methods for analyzing data used to monitor the bear population and factors impacting bears by June 1, 2003.
  - Job/Activity c:** Staff will update the McNeil River State Game Sanctuary and Refuge Operational Plan to reflect conservation needs. In Year 1, the methods for data collection will be reviewed and revised and research needs defined. In Year 2, revised

data collection methods will be implemented and the results evaluated. A final revised plan will be produced by June 1, 2004.

### **Summary of Project Accomplishments:**

**NOTE: The following accomplishments refer to one field season of data June 1-August 25, 2002.**

Objective 1. a.& b. Joe Meehan (Lands Coordinator) supervised 3 field staff that safely guided and accommodated 175 bear viewers, photographers. No resource damage occurred.

Facilities and services for viewers were maintained, most notable being the stabilization of the cook shack foundation. A community-based volunteer work party assisted with pre-season maintenance.

Objective 2. a. Staff initiated a daily census of bears in order to improve assessment of bear population changes. The information will be used in reviewing the operation plan.

**NOTE: The following accomplishments refer to interim reporting period of July 1, 2002 through June 30, 2003**

Objective 1.c. Staff responded to 17 inquiries from scientists, filmmakers and educators interested in photographing and studying bears. Sixteen scientific/educational permits were issued for the 2003 viewing season.

The McNeil River State Game Sanctuary website content was improved and 863 applications were taken online for the 2003 viewing season.

Objective 2. b. & c. The Division biometrician position was vacant and we were unable to improve the method for comparing index counts for the sanctuary by June 30, 2003. Consequently, the index count for the July-August 2002 period of 36.0 bears will be compared to a 2003 count using the same method. Improvement of the counting method has been deferred till winter of 2003/2004 when a biometrician will be available. The index counts will be used in reviewing the operation plan.

**Project Costs:** Federal share \$35,513 + state share \$11,838 = total cost \$47,351 (SWG portion)

Federal share \$35,201 + state share \$11,734 = total cost \$46,935 (WCRP portion)

**Prepared By:** Colleen Matt, Lands and Public Services Coordinator, Region II

**Date:** September 8, 2003

**FEDERAL AID  
INTERIM PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** T-1-6

**PROJECT NR.:** 1.0

**WORK LOCATION:** Statewide

**PROJECT DURATION:** 1 July 2002 – 30 September 2004

**PROJECT REPORTING PERIOD:** 1 July 2002 – 30 June 2003

**PROJECT TITLE:** Partnerships for Conservation of Nongame Species

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**Project Objectives:**

Objective 1: Partner with Discovery Southeast (selected through a spring 2002 RFP process) for their research on habitat use of amphibians in northern Southeast Alaska. Well documented worldwide and Pacific Northwest declines in populations of amphibians make them a “species” of greatest conservation need for ADF&G.

**Job/Activity a. :** A contract for this partnership will be finalized by August 30, 2003. By November 30, 2003 researchers will document habitat use of the four regional species of amphibians in northern Southeast, compare occupied and unoccupied ponds and wetlands, and map the habitats occupied. In addition to providing the first known assessment of amphibian populations in this part of Southeast, refinement of effective and efficient survey methods will permit future application to other parts of Southeast.

**Job/Activity b. :** Researchers will provide a report, with maps, describing the current distribution of amphibians in the Juneau area, summarizing what is known about past distributions and describing habitats where amphibians are currently found by January 15, 2004. This project will contribute directly to land-use planning in the Juneau area.

Objective 2. Award partnership funds to projects that best meet established criteria. Administer contracts.

**Job/Activity a :** Review and revise the 2002 Partnership Request for Proposals to meet State Wildlife Grant criteria, indicate that the partners would be contributing to development of a Comprehensive Wildlife Conservation Strategy, address Division of Wildlife Conservation species of greatest conservation need, and reflect our experience with the initial Partnership RFP (under WCRP) funding. Issue the RFP by January 15, 2003. Enter into at least four partnership agreements by July 1, 2003. Administer contracts. To allow for a full field season plus

planning and logistical preparation time, the partners contracts will extend from date of issue through September 30, 2004.

Objective 3. Incorporate results of research projects on non-game species conducted by contracted partners in development of the state Comprehensive Wildlife Conservation Strategy.

### **Summary of Project Accomplishments:**

Objective 1.a. The Discovery Southeast research project, which focuses primarily on amphibian breeding pond habitat, is collecting occurrence data and anecdotal evidence of population changes, to document distribution and begin evaluating population trends. Using GIS tools, 150 ponds near the Juneau road system were identified and mapped. Six ponds from each of 7 different geomorphic origin classes received multiple visits during optimal times to document amphibian breeding activity. Only 5 of the 42 selected ponds supported amphibian larvae. Several other non-selected ponds did contain larval western toad and rough-skinned newt. In addition to the 42 selected ponds, 60 more sites at Juneau, Taku River, St. James Bay, Berners Bay, Admiralty Island, and Castle River on Kupreanof Island were visited and assessed. A total of 210 visits (includes re-visits) to potential amphibian breeding sites have been made to date. The study has documented occurrence of 5 amphibian species in the Juneau area: western toad, rough-skinned newt, and wood, spotted, and tree frog. The last 3 species are represented by localized populations and likely resulted from human introductions. Historical information from one public meeting in Juneau, a feature article in "Discoveries – New and Views from Discovery Southeast," and several news articles have generated data that has been compiled into an Atlas of 250 observations throughout Southeast Alaska. These will supplement the recent U.S. Fish and Wildlife Service Atlas, which was based on verified specimens and museum collections.

1. b. A formal report is expected at the end of the contract period, September 30, 2003.

Objective 2.a. The amphibian project with Discovery Southeast in Objective 1 was selected as part of a spring 2002 RFP process, and the final contract was signed in August 2002 after the T-1-6 Federal Aid grant was approved. Additional work was completed toward a streamlined contracting process in 2003. Consequently, a second contract, focusing on monitoring population trends of high priority bird species of Alaska's Interior, was developed with the Alaska Bird Observatory (ABO). A second round of partner project identification and call for proposals is expected to be initiated by the end of December 2003.

The ABO contract extends for 2 years and involves capturing with mistnets and banding neotropical and other birds during the spring and fall migrations at Creamer's Field in Fairbanks. Migration monitoring stations are one of the 5 methods recognized to study broad trends in regional bird populations. Among the 19 species captured at the Creamer's station are 3 species on some organizations' lists of species of conservation concern – gray-cheeked thrush, blackpoll warbler, and Hammond's flycatcher. Spring migration capturing occurred from 25 April through 7 June 2003 (44 days) with nets opened approximately 6 hours per day from sunrise to about noon. A report will be produced in November 2003 with results of spring and fall 2003 banding activities. It will be included with the next T-1-6 grant report.

Objective 3. Amphibian and bird surveys funded in partnership with Discovery Southeast and ABO respectively will provide needed information on the distribution and abundance of these species and whether they qualify as species of concern for the state's Comprehensive Wildlife Conservation Strategy. Further, the Discovery Southeast work will document threats and greatly improve our understanding of habitat selection and use of several amphibian species.

**Project Costs:**

Federal share \$ 32,611 + state share \$ 00 + third party in-kind match \$ 10,000 (estimated, final amount will be reported at end of project) = total cost \$ 42,611. Completion date for contract with Discovery Southeast is September 30, 2003. An invoice for the ABO spring work was not received during this report period.

**Prepared by:** Mary L. Rabe, Nongame Program Coordinator

**Date:** September 10, 2003

**FEDERAL AID  
INTERIM PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** T-1-2

**PROJECT NR.:** 1.0

**WORK LOCATION:** Walrus Islands State Game Sanctuary

**PROJECT DURATION:** 1 July 2002 – 31 December 2006

**PROJECT REPORTING PERIOD:** 1 July 2002 – 30 June 2003

**PROJECT TITLE:** Walrus Islands Conservation Planning

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**Project Objectives:**

1. Track trends in the number of walrus using Bristol Bay (annually and seasonally) from 2002-2006.

**Job/Activity a:** Staff will count walrus hauled out on each beach or estimate their numbers daily from mid-May to mid-August each year.

**Job/Activity b:** Staff will collect “ground truth” information to evaluate accuracy of satellite imagery to count walrus during summer 2002.

**Job/Activity c:** ADF&G will provide shelter and support for USGS and USFWS research biologists in the collection of skin samples of walrus during summer 2002.

**Job/Activity d:** Staff will record all observations of anthropogenic disturbances by visitors, boat traffic, and air traffic.

2. With Federal, State, Native and other groups, develop cooperative conservation efforts from 2002-2006.

**Job/Activity a:** Staff will provide data for updating the Bristol Bay Walrus Conservation Plan

**Job/Activity b:** Staff will assist in developing and maintaining cooperative management of walrus in Bristol Bay with Federal, State, Native and other groups by June 30, 2006.

**Job/Activity c:** Staff will update cooperative management agreement between USFWS and ADF&G by March 2003.

**Summary of Project Accomplishments** (numbers correspond to project objectives/activities):

**NOTE: The following accomplishments refer to one field season of data May 14-August 11, 2002.**

1. a. Walrus hauled out on the east-side beaches of Round Island were counted on 90 consecutive days. The high count was of 3371 walrus on May 29, 2002.  
b. Satellite photos were taken successfully on May 17, June 17, July 10, and July 28. Staff collected “ground truth” information to evaluate accuracy satellite images though USFWS has yet to analyze the results.

- c. ADF&G provided shelter and support for 2 USGS and 1 USFWS research biologists. The USGS biologist collected approximately 50 skin samples of walrus to help delineate American/Russian populations and to investigate the validity of genetic population estimates.
- d. Staff recorded all observations of anthropogenic disturbances by visitors, boat traffic, and air traffic. Nine airplanes flew over the island causing several hundred walrus to abandon the haulout after all but one of these incidents.

**NOTE: The following accomplishments refer to interim reporting period of July 1, 2002 through June 30, 2003**

- 2. a. Staff provided data for updating the Bristol Bay Walrus Conservation Plan. A USFWS biologist is currently circulating a draft plan within USFWS for comment before sending it out to partner agencies.
- c. Changes to the walrus hunting season were approved by the Alaska Board of Game in March '03. Staff drafted a revised Cooperative Agreement to manage Round Island walrus during this reporting period.

**Project Costs:** Federal share \$46,037.25 + state share \$15,345.75 = total cost \$ 61,383

**Prepared By:** Colleen Matt, Lands & Public Services Coordinator

**Date:** September 8, 2003

**FEDERAL AID  
INTERIM PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

**STATE WILDLIFE GRANT (SWG)**

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** T-1-1

**PROJECT NR.:** 1.0

**WORK LOCATION:** Wolverine Creek Cove, Redoubt Bay Critical Habitat Area

**PROJECT DURATION:** 1 July 2002 – 30 September 2005

**PROJECT REPORTING PERIOD:** 1 July 2002 – 30 June 2003

**PROJECT TITLE:** Wolverine Creek Planning

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**Project Objectives:**

1. Reduce 90% or more of bear/human and user conflicts (i.e., incidents of bears getting fish directly from anglers and visitors being directly threatened by bears) by December 30, 2004 by engaging anglers, bear watchers, sport fishing and bear viewing guides, fisheries biologists and wildlife biologists in a cooperative planning process and at co-management of the area.

**Job/Activity a.:** Form a co-management team of anglers, bear watchers, sport fishing and bear viewing guides, and fisheries, habitat and wildlife biologists by September 30, 2002.

**Job/Activity b.:** Team develops and tests plan to resolve and establish self-management guidelines for commercial guides and private parties from fall 2002 to fall 2004.

**Job/Activity c.:** Staff evaluates the plan for effectiveness and minimization of conflicts, and includes recommendations for future management of the site by December 30, 2004.

2. Staff will annually assess the management environment (number and type of conflicts) in the field and provide this information to the planning team during 2002-2004; produce a preliminary assessment in Year 1, and an annual assessment of the effectiveness of the planning process in Years 2-3.
3. Graduate student and assistants will quantify the impacts of human activities on bear foraging for salmon in Wolverine Creek cove between July 1 and August 15, 2002 and June 5 and August 15, 2003 and produce a report to the planning team by December 2004.

**Job/Activity a.:** Collect data on the interactions and relationships among salmon, bear foraging, and visitor activities.

**Job/Activity b.:** Present results on the interactions among salmon, bear foraging, and visitor activities to the planning team during fall 2004.

**Job/Activity c.:** Incorporate the results of the study into the final evaluation of the planning process by December 30, 2004.

## **Summary of Project Accomplishments:**

**NOTE: The following accomplishments refer to one field season of data June – August 25, 2002.**

Objective 2: Three staff were deployed to assess the management environment between June 13 and August 8. Nineteen categories of bear/human and user conflicts categories were measured including a) anglers casting toward bears; b) bears seeking hooked fish and angler responses; and c) bears climbing into boats or onto plane floats.

Objective 3: a. A team of 3 researchers recorded both the location and time periods used by boats, bears attempting to fish, bears catching live fish, and bears scavenging dead fish. The first period for collection was twenty-six, 24-hour periods from June 18-August 1, 2002.

b. Preliminary results of the 2002 season research were presented to the Wolverine Creek Management Committee in May 2003.

**NOTE: The following accomplishments refer to interim reporting period of July 1, 2002 through June 30, 2003**

Objective 1. a. The Wolverine Creek Management Committee was formed in November 2002 and met twice more to discuss management issues.

b. Twelve guidelines were approved and disseminated to all users of the site in May and June. The role of the public and ADF&G was discussed and the group developed a step-down protocol to follow when guidelines are not being observed. Staff developed 6 management objectives and criteria for success in achieving these objectives. These objectives were presented to the Wolverine Creek Management Committee and formed the basis for management data gathering during the 2003 field season.

**Project Costs:** Federal share \$97,468 + state share \$32,489 = total cost \$129,957

**Prepared By:** Colleen Matt, Lands & Public Services Coordinator

**Date:** September 11, 2003